

### SECTION 1. MATERIAL IDENTIFICATION

#### **PRODUCT DESCRIPTION**

Our Grating and frame are functional, attractive and economical solution to exterior and interior drainage problem provides a dynamic and contemporary appearance to complement today's architectural spaces.

#### MATERIAL USED

Stainless Steel - Grade 316

#### MANUFACTURER'S NAME

SAKSHI INNOVATIONS PRIVATE LIMITED Gurudwara Somasar Road, P.O. Sahnewal, Village TIBBA, Distt. LUDHIANA-141 120 (INDIA)

## SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition	CAS No.	% Weight
Carbon	7440-44-0	0.022
Chromium	7440-47-3	16.77
Iron	7439-89-6	67.91
Manganese	7439-96-5	1.761
Phosphorus	7723-14-0	0.039
Silicon	7440-21-3	0.359
Sulphur	7704-34-9	0.0055
Nickel	7440-02-0	10.24
Molybdenum	7439-98-7	2.074
Aluminium	7429-90-5	0.013
Cobalt	7440-48-4	0.21
copper	7440-50-8	0.403
Niobium	7440-03-1	0.019
Titanium	7440-32-6	0.0060
Vanadium	7440-62-2	0.069
Tungsten	7440-33-7	0.014
Tin	7440-31-5	0.012
Arsenic	7440-38-2	0.0075
Nitrogen	7727-37-9	0.066

## SECTION 3. HAZARDS IDENTIFICATION

MERCENCY OVERVIEW : Wolding brazing cutting arinding and machining of this material may liber

EMERGENCY OVERVIEW	:	potentially hazardous fumes & dust. This dust or fumes may be harmful if inhaled. Molten material may cause thermal burns.
FLAMMABILITY	:	Not Applicable
PRIMARY ROUTE OF EXPOSURE	:	Inhalation of fumes from Welding or Burning, Dust from Grinding or Cutting.
ROUTE OF EXPOSURE	:	Eye, Skin contact or Inhalation
		Steel production sheet, coil do not pose a significant health hazardous. However when subjected to Welding, Burning, Sawing, Brazing & grinding etc. Potentially hazardous fumes or dust may be generated. Needs adequate exhaust ventilation
		& appropriate protective equipment for workers.
EFFECT OF SHORT TERM (ACUTE) E	XPOSURE	
INHALATION	:	Fumes & dust may be irritating to respiratory system.
EYE CONTACT	:	Dust or particles may cause mechanical irritation.
SKIN CONTACT	:	Dust or particles may cause irritation due to abrasion.
INGESTION	:	Not anticipated under normal circumstances. As such this material is not expected
		to be acutely toxic via ingestion.
EFFECT OF LONG-TERM (CHRONIC)	EXPOSU	RE
	:	Chronic inhalation of high concentrations of metallic fumes and dusts are
		associated with the following conditions.
IRON OXIDE	:	Chronic inhalation of excessive concentrations of iron oxide fumes or dust may
		results in development of a benign pneumoconiosis, called siderosis, which is observable as an x-ray change.
MANGANESE	:	Chronic exposure to high concentrations of manganese fumes and dusts may increase the incidence of bronchitis pneumonia and lung damage and may adversely affect the central nervous system with symptoms resembling Parkinson's disease.
CHROMIUM	:	The alleged health hazards associated with exposure to chromium are dependent on its oxidation state. The metal form (chromium as it exists in this product) is of
		very low toxicity. The hexavalent form is very toxic.
NICKEL	:	Nickel is a common contact allergen & causes some sensitization, allergic contact dermatitis (ACD). Fumes are respiratory irritants and may cause respiratory disease, skin contact can also cause an allergic skin rash, nickel and its compounds have been reported to cause cancer of the lungs and sinuses.
SILICON	:	Elementary silicon is an inert material which appears to lack the property of causing fibrosis in lung tissue. However, slight pulmonary lesions have been reported in Laboratory animals from intratracheal ingestion of silicon dust. Silicon dust has little adverse effect on lungs and does not appear to produce significant organic disease or toxic effects when exposures are kept under the TLV. Silicon may cause chronic respiratory effects
MOLYBDENUM	:	Based on animal experiments, molybdenum and its compounds are highly toxic. Some evidence of liver dysfunction with hyperbilirubinemia have been reported in workmen chronically exposed . In addition signs of gout have been found in factory workers . The main features were joint pains in the knees, hands, feet, articular deformities, erythema, and edema of the joint areas.

### SECTION 4. FIRST AIDS MEASURES

EYES	:	If dust/fumes get in eyes, immediately flush with large amounts of running water for several minutes and seek Prompt medical attention.
SKIN	:	If dust gets on skin wash contaminated area with mild soap and water. Remove and wash contaminated clothing if rash or irritation persists, seek medical attention.
INHALATION	:	If inhalation of dust / fumes occurs, immediately remove victim from the adverse environment to fresh air and seek medical attention. If breathing has stopped, certified individuals should perform CPR. Keep affected person warm and at rest.
INGESTION	:	If significant amounts of metal are ingested, seek medical attention.

## SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHER MEDIA SUITABLE : In case of fire, use water spray (Fog), foam, dry chemical extinguisher or Co<sup>2</sup>.

SPECIAL EXPOSURE HAZARDS	:	No special fire or explosion hazard. Promptly isolate the scene by removing all persons. Vicinity of the incident if there is a fire.
HAZARDOUS COMBUSTION	:	Not applicable for solid form alloy. Toxic metal and metallic Oxide.
PRODUCTS	:	Fumes may be evolved from fires involving finely divided alloy
SPECIAL PROTECTIVE	:	Fire Fighters should wear appropriate protective equipment and Equipment of Fire Fighters self-contained breathing apparatus (SCBA) with afull face-piece operated in positive pressure mode.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Minimal problems with spills of this product would be expected to occur because of its solid form. Protective Equipment: Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis. If your process involves grinding or any other action that causes the release of dust or fumes, approved safety glasses or goggles should be worn

SECTION 7. HANDELING & ST	OR	AGE
HANDLING PRECAUTIONS	:	Providing good ventilation and/or local exhaust systems are used.
STORAGE REQUIREMENTS	:	Store in a dry place.
PACKAGING MATERIAL RECOMMENDED	:	Use original container.

## SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTIONS

RESPIRATORY PROTECTION	:	NIOSH / MSHA approved dust/mist/fume respirators should be used during welding, burning and grinding operations, if applicable exposure limits are exceeded.
EYE PROTECTION	:	Safety glasses should always be worn when grinding or cutting. Face shields should be worn when welding or burning.
SKIN PROTECTION	:	Skin covering working clothes, wear dust proof overalls if large quantity of dust is generated.
HYGIENE MEASURES	:	Wash all exposed skin and face thoroughly after handling products before eating, smoking or using the lavatoru and at the end of the working period.
ENVIRONMENTAL EXPOSURE CONTROLS		
TECHNICAL MEASURES	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process

## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE	:	Solid
MELTING TEMPERATURE	:	1375-1400 °C
DENSITY (G/CM3)	:	7.750
HARDNESS (HV5)	:	205
FINISH	:	Black Powder Coated

### SECTION 10. REACTIVITY AND STABILITY

STABILITY

: The product is stable.

:

POSSIBILITY OF HAZARDOUS REACTIONS Under normal conditions of storage and use, hazardous reactions will Not Occur.

equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 11. TOXICOLOGICAL INFORMATION

According to our experience and information the product has no harmful effects on health if properly handled.

### SECTION 12. ECHOLOGICAL INFORMATION

The product is practically insoluble in water. In views of its consistency and insolubility in water, no ecological Problems are to be expected if the product is properly handled.

## SECTION 13. DISPOSAL CONSIDERATIONS

METHODS OF DISPOSAL : Steel scrap should be recycled wherever possible

GENERAL INFORMATION : Dispose of in accordance with federal, provincial, state Or local regulations.

#### SECTION 14. TRANSPORT INFORMATION

Material is not listed as a hazardous substance for any mode of transportation.

### SECTION 15. REGULATORY INFORMATION

SARA TITLE III HAZARD CATEGORIZATION	:	Product (Dust and Fume) is categorized as an immediate (acute) health hazard and a delayed (chronic) Health hazard is defined by 40 CFR 370.
SARA TITLE III SECTION 302	:	No components are listed as extremely hazardous substances
EXTREMELY HAZARDOUS		
SUBSTANCES (EHSS):		

## SECTION 16. OTHER INFORMATION

The information provided herein is Compiled by Sakshi to be accurate from sources believed to be reliable, but it is the responsibility of the user investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use. Sakshi makes no warranty, express or implied, concerning the product or the merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided.



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Phosphorus	7723-14-0	0.041
Sulphur	7704-34-9	0.006
Chromium	7440-47-3	18.250
Molybdenum	7439-98-7	0.240
Nickel	7440-02-0	8.240
Aluminium	7429-90-5	0.0034
Cobalt	7440-48-4	0.220
Copper	7440-50-8	0.360
Niobium	7440-03-1	0.0079
Titanium	7440-32-6	0.004
Venadium	7440-62-2	0.006
Tungsten	7440-33-7	0.021
Tin	7440-31-5	0.008
Arsenic	7440-38-2	0.003
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Nitrogen	7727-37-9	0.024
Iron	7439-89-6	71.140

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SECTION 4.	FIRST AIDS MEASURES
EYES	: If dust/fumes get in eyes, immediately flush with large amounts of running water for several minutes and seek Prompt medical attention.
SKIN	: If dust gets on skin wash contaminated area with mild soap and water. Remove and wash contaminated clothing if rash or irritation persists, seek medical attention.
INHALATION	: If inhalation of dust / fumes occurs, immediately remove victim from the adverse environment to fresh air and seek medical attention. If breathing has stopped, certified individuals should perform CPR. Keep affected person warm and at rest.
INGESTION	: If significant amounts of metal are ingested, seek medical attention.

SECTION 5. FIRE FIGHTING M	1EA	ASURES
EXTINGUISHER MEDIA SUITABLE	:	In case of fire, use water spray (Fog), foam, dry chemical extinguisher or Co².
SPECIAL EXPOSURE HAZARDS	:	No special fire or explosion hazard. Promptly isolate the scene by removing all

		persons. Vicinity of the incident if there is a fire.
HAZARDOUS COMBUSTION	:	Not applicable for solid form alloy. Toxic metal and metallic Oxide.
PRODUCTS	:	Fumes may be evolved from fires involving finely divided alloy
SPECIAL PROTECTIVE	:	Fire Fighters should wear appropriate protective equipment and Equipment of Fire Fighters self-contained breathing apparatus (SCBA) with afull face-piece operated in positive pressure mode.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Minimal problems with spills of this product would be expected to occur because of its solid form. Protective Equipment: Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis. If your process involves grinding or any other action that causes the release of dust or fumes, approved safety glasses or goggles should be worn

### SECTION 7. HANDELING & STORAGE

HANDLING PRECAUTIONS	:	Providing good ventilation and/or local exhaust systems are used.
STORAGE REQUIREMENTS	:	Store in a dry place.
PACKAGING MATERIAL RECOMMENDED	:	Use original container.

# SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTIONS

RESPIRATORY PROTECTION	:	NIOSH / MSHA approved dust/mist/fume respirators should be used during welding, burning and grinding operations, if applicable exposure limits are exceeded.
EYE PROTECTION	:	Safety glasses should always be worn when grinding or cutting. Face shields should be worn when welding or burning.
SKIN PROTECTION	:	Skin covering working clothes, wear dust proof overalls if large quantity of dust is generated.
HYGIENE MEASURES	:	Wash all exposed skin and face thoroughly after handling products before eating, smoking or using the lavatory and at the end of the working period.
ENVIRONMENTAL EXPOSURE CONTROLS		
TECHNICAL MEASURES	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE	:	Solid
MELTING TEMPERATURE	:	1400-1450 °C
DENSITY (G/CM3)	:	7.750
HARDNESS (HV5)	:	220
FINISH	:	Black Powder Coated

### SECTION 10. REACTIVITY AND STABILITY

STABILITY

: The product is stable.

POSSIBILITY OF HAZARDOUS	:	Under normal conditions of storage and use, hazardous reactions will Not Occur.
REACTIONS		

According to our experience and information the product has no harmful effects on health if properly handled.

## SECTION 12. ECHOLOGICAL INFORMATION

The product is practically insoluble in water. In views of its consistency and insolubility in water, no ecological Problems are to be expected if the product is properly handled.

### SECTION 13. DISPOSAL CONSIDERATIONS

METHODS OF DISPOSAL	:	Steel scrap should be recycled wherever possible
GENERAL INFORMATION	:	Dispose of in accordance with federal, provincial, state Or local regulations

#### SECTION 14. TRANSPORT INFORMATION

Material is not listed as a hazardous substance for any mode of transportation.

### SECTION 15. REGULATORY INFORMATION

SARA TITLE III HAZARD CATEGORIZATION	:	Product (Dust and Fume) is categorized as an immediate (acute) health hazard and a delayed (chronic) Health hazard is defined by 40 CFR 370.
SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS	:	No components are listed as extremely hazardous substances

## SECTION 16. OTHER INFORMATION

SUBSTANCES (EHSS):

The information provided herein is Compiled by Sakshi to be accurate from sources believed to be reliable, but it is the responsibility of the user investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use. Sakshi makes no warranty, express or implied, concerning the product or the merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided.



## SECTION 1. MATERIAL IDENTIFICATION

### **PRODUCT DESCRIPTION**

Our Grating and frame are functional, attractive and economical solution to exterior and interior drainage problem provides a dynamic and contemporary appearance to complement today's architectural spaces.

#### MATERIAL USED

Stainless Steel - Grade 430

#### MANUFACTURER'S NAME

SAKSHI INNOVATIONS PRIVATE LIMITED Gurudwara Somasar Road, P.O. Sahnewal, Village TIBBA, Distt. LUDHIANA-141 120 (INDIA)

## SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition	CAS No.	% Weight
Carbon	7440-44-0	0.072
Chromium	7440-47-3	16.33
Iron	7439-89-6	82.21
Manganese	7439-96-5	0.616
Phosphorus	7723-14-0	0.033
Silicon	7440-21-3	0.315
Sulphur	7704-34-9	0.0066
Nickel	7440-02-0	0.171
Molybdenum	7439-98-7	0.020
Aluminium	7429-90-5	0.036
Cobalt	7440-48-4	0.031
Copper	7440-50-8	0.082
Niobium	7440-03-1	0.0069
Titanium	7440-32-6	0.0039
Vanadium	7440-62-2	0.031
Tin	7440-31-5	0.0055
Arsenic	7440-38-2	0.0021
Nitrogen	7727-37-9	0.028

#### SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	:	Welding, brazing, cutting, grinding and machining of this material may liberate potentially hazardous fumes & dust. This dust or fumes may be harmful if inhaled. Molton material may cause thermal burns
ΕΙ ΔΜΜΔΒΙΙ ΙΤΥ		Not Applicable
PRIMARY ROUTE OF EXPOSURE		Induction of fumes from Welding or Burning, Dust from Grinding or Cutting
		Fue Skin contact or Inhalation
	·	Steel production sheet, coil do not pose a significant health hazardous. However
		when subjected to Welding, Burning, Sawing, Brazing & arinding etc. Potentially
		hazardous fumes or dust may be generated. Needs adequate exhaust ventilation
		& appropriate protective equipment for workers.
EFFECT OF SHORT TERM (ACUTE) E	XPOSURE	
INHALATION	:	Fumes & dust may be irritating to respiratory system.
EYE CONTACT	:	Dust or particles may cause mechanical irritation.
SKIN CONTACT	:	Dust or particles may cause irritation due to abrasion.
INGESTION	:	Not anticipated under normal circumstances. As such this material is not expected
		to be acutely toxic via ingestion.
EFFECT OF LONG-TERM (CHRONIC)	EXPOSU	RE
	:	Chronic inhalation of high concentrations of metallic fumes and dusts are
		associated with the following conditions.
IRON OXIDE	:	Chronic inhalation of excessive concentrations of iron oxide fumes or dust may
		results in development of a benign pneumoconiosis, called siderosis, which is
		observable as an x-ray change.
MANGANESE	:	Chronic exposure to high concentrations of manganese fumes and dusts may
		increase the incidence of bronchitis pneumonia and lung damage and may
		adversely affect the central nervous system with symptoms resembling
		Parkinson's disease.
CHROMIUM	:	The alleged health hazards associated with exposure to chromium are dependent
		on its oxidation state. The metal form (chromium as it exists in this product) is of
		very low toxicity. The hexavalent form is very toxic.
NICKEL	:	Nickel is a common contact allergen & causes some sensitization, allergic contact
		dermatitis (ACD). Fumes are respiratory irritants and may cause respiratory
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SILICON	:	Elementary silicon is an inert material which appears to lack the property of
		causing fibrosis in lung tissue. However, slight pulmonary lesions have been
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		significant organic disease or toxic effects when exposures are kept under the
		TLV. Silicon may cause chronic respiratory effects.

SECTION 4.	FIRST AIDS MEASURES
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SKIN	: If dust gets on skin wash contaminated area with mild soap and water. Remove and wash contaminated clothing if rash or irritation persists, seek medical attention
INHALATION	: If inhalation of dust / fumes occurs, immediately remove victim from the adverse environment to fresh air and seek medical attention. If breathing has stopped, certified individuals should perform CPR. Keep affected person warm and at rest.
INGESTION	: If significant amounts of metal are ingested, seek medical attention.
SECTION 5.	FIRE FIGHTING MEASURES

EXTINGUISHER MEDIA SUITABLE	:	In case of fire, use water spray (Fog), foam, dry chemical extinguisher or Co².
SPECIAL EXPOSURE HAZARDS	:	No special fire or explosion hazard. Promptly isolate the scene by removing all persons. Vicinity of the incident if there is a fire.

HAZARDOUS COMBUSTION	:	Not applicable for solid form alloy. Toxic metal and metallic Oxide.
PRODUCTS	:	Fumes may be evolved from fires involving finely divided alloy
SPECIAL PROTECTIVE	:	Fire Fighters should wear appropriate protective equipment and Equipment of Fire Fighters self-contained breathing apparatus (SCBA) with afull face-piece operated in positive pressure mode.

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SECTION 7. HANDELING & STORAGE						
HANDLING PRECAUTIONS	:	Providing good ventilation and/or local exhaust systems are used.				
STORAGE REQUIREMENTS	:	Store in a dry place.				
PACKAGING MATERIAL RECOMMENDED	:	Use original container.				

## SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTIONS

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TECHNICAL MEASURES	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels

## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE	:	Solid
MELTING TEMPERATURE	:	1425-1510 °C
DENSITY (G/CM3)	:	7.750
HARDNESS (HV5)	:	175
FINISH	:	Black Powder Coated

## SECTION 10. REACTIVITY AND STABILITY

- STABILITY
- : The product is stable.

POSSIBILITY OF HAZARDOUS REACTIONS : Under normal conditions of storage and use, hazardous reactions will Not Occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

According to our experience and information the product has no harmful effects on health if properly handled.

### SECTION 12. ECHOLOGICAL INFORMATION

The product is practically insoluble in water. In views of its consistency and insolubility in water, no ecological Problems are to be expected if the product is properly handled.

### SECTION 13. DISPOSAL CONSIDERATIONS

METHODS OF DISPOSAL	:	Steel scrap should be recycled wherever possible

## GENERAL INFORMATION : Dispose of in accordance with federal, provincial, state Or local regulations.

### SECTION 14. TRANSPORT INFORMATION

Material is not listed as a hazardous substance for any mode of transportation.

## SECTION 15. REGULATORY INFORMATION

SARA TITLE III HAZARD CATEGORIZATION	:	Product (Dust and Fume) is categorized as an immediate (acute) health hazard and a delayed (chronic) Health hazard is defined by 40 CFR 370.
SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS	:	No components are listed as extremely hazardous substances
SUBSTANCES (EHSS):		

### SECTION 16. OTHER INFORMATION

The information provided herein is Compiled by Sakshi to be accurate from sources believed to be reliable, but it is the responsibility of the user investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use. Sakshi makes no warranty, express or implied, concerning the product or the merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided.